



0300 \$
Docket No.: PA-0033 US

Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Box Sequence, P.O. Box 2327, Arlington, VA 22202 on August 9, 2002.

By: Joyce Abriam Printed: Joyce Abriam

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Schebye et al.
Title: CDNAS EXPRESSED IN ADIPOCYTE DIFFERENTIATION
Serial No.: 09/918,624 Filing Date: July 30, 2001
Examiner: Duffy, P. Group Art Unit: 1645

Box Sequence
United States Patent and Trademark Office
P.O. Box 2327
Arlington, VA 22202

TRANSMITTAL FEE SHEET

Sir:
Transmitted herewith are the following for the above-identified application:

- 1. Return Receipt Postcard;
- 2. Response to Notice to Comply (1 pg.); app.
- 3. Copy of said Notice to Comply (~~10~~ pp.);
- 4. Substitute Submission Under 37 CFR § 1.821-1.825 Sequence Listing (1 pg.);
- 5. One (1) Substitute computer-readable CDR; and
- 6. Petition for Extension of Time - Three (3) months (1pg.).

The fee has been calculated as shown below.

 No additional Fee is required.
 X Fee for Petition for Extension of Time Under 37 CFR - 1.17(a) - 3 Mo(s). \$ 920.00
 X Please charge Deposit Account No. **09-0108** in the amount of : \$ 920.00

The Commissioner is hereby authorized to charge any additional fees required under 37 CFR 1.16 and 1.17, or credit overpayment to Deposit Account No. 09-0108. **A duplicate copy of this sheet is enclosed.**

Respectfully submitted,

INCYTE GENOMICS, INC.

Date: 09 August 2002

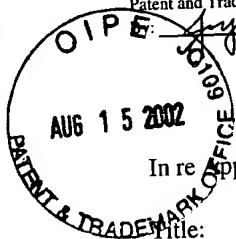
for Lynn E. Murry, Ph.D.
Reg. No. 42,918
Direct Dial Telephone: (650) 845-4159

3160 Porter Drive
Palo Alto, California 94304
Phone: (650) 855-0555
Fax: (650) 845-4166

Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: United States Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202 on August 9, 2002.

Printed: Joyce Abriam



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Schebye et al.

Title: CDNAS EXPRESSED IN ADIPOCYTE DIFFERENTIATION

Serial No.: 09/918,624

Filing Date: July 30, 2001

Examiner: Duffy, P.

Group Art Unit: 1645

United States Patent and Trademark Office
Box Sequence, P.O. Box 2327
Arlington, VA 22202

**RESPONSE TO NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING
NUCLEOTIDE SEQUENCE
AND/OR AMINO ACID SEQUENCE DISCLOSURES**

Sir:

In response to the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures mailed by the United States Patent and Trademark Office on March 20, 2002 (copy attached), Applicants submit the following documents to complete the filing for the above-identified patent application. The period of time for response has been extended until August 20, 2002, by the accompanying Petition and fee.

1. **Substitute** Submission Under 37 CFR §1.821-1.825 Sequence Listing (1 pg);
2. One (1) **Substitute** computer-readable CD-R; and
3. Petition for Extension of Time (3 months) (1 pg.).

Applicants believe that a fee is not necessary with this communication. However, if the Commissioner determines that additional fees are due or that an excess fee has been paid, the Patent Office is authorized to debit or credit (respectively) Deposit Account No. **09-0108**.

If there are any questions regarding the above, the Examiner is invited to call the undersigned.

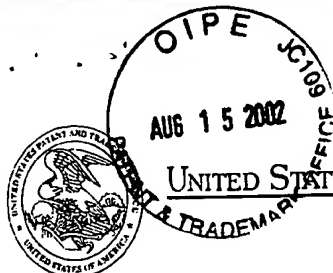
Respectfully submitted,

INCYTE GENOMICS, INC.

Richard C. Shuster Reg No. 37,027
for Lynn E. Murry, Ph.D.
Reg. No. 42,918
Direct Dial Telephone: (650) 845-4159

Date: 09 August 2002

3160 Porter Drive
Palo Alto, California 94304
Phone: (650) 855-0555
Fax: (650) 849-8886



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/918,624	07/30/2001	Xiao Min Schebye	PA-0033 US

CONFIRMATION NO. 3179

FORMALITIES LETTER



OC000000007673537

INCYTE GENOMICS, INC.
LEGAL DEPARTMENT
3160 PORTER DRIVE
PALO ALTO, CA 94304

Date Mailed: 03/20/2002

**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS
CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE
DISCLOSURES**


Applicant is given **TWO MONTHS FROM THE DATE OF THIS NOTICE** within which to file the items indicated below to avoid abandonment. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

For questions regarding compliance to these requirements, please contact:

- For Rules Interpretation, call (703) 308-4216
- To Purchase PatentIn Software, call (703) 306-2600
- For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

*A copy of this notice **MUST** be returned with the reply.*

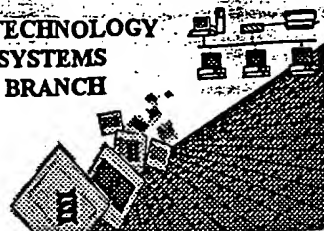

Customer Service Center
Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE



RAW SEQUENCE LISTING **ERROR REPORT**

BIOTECHNOLOGY
SYSTEMS
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/918,624A
Source: OIPF
Date Processed by STIC: 1/26/2002

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER** VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

Due 8/20

PA-0033 US.



OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/918,624A

DATE: 01/26/2002
TIME: 12:53:20

Input Set : D:\Pa0033.txt
Output Set : N:\CRF3\01252002\I918624A.raw

Does Not Comply
Corrected Diskette Needed

1 <110> APPLICANT: Schebye, Xiao Min
2 Sornasse, Thierry
4 <120> TITLE OF INVENTION: CDNAS EXPRESSED IN ADIPOCYTE DIFFERENTIATION
6 <130> FILE REFERENCE: PA-0033 US
8 <140> CURRENT APPLICATION NUMBER: US/09/918,624A
9 <141> CURRENT FILING DATE: 2002-01-04
11 <160> NUMBER OF SEQ ID NOS: 71
12 <170> SOFTWARE: PERL Program
14 <210> SEQ ID NO: 1
15 <211> LENGTH: 5041
16 <212> TYPE: DNA
17 <213> ORGANISM: Homo sapiens
19 <300> PUBLICATION INFORMATION:
20 <308> DATABASE ACCESSION NO: Genbank ID No: g1572720
W--> 22 <300> PUBLICATION INFORMATION: P
23 gcggccgcga ctattcggtta cctgaaaaca acgatggcat ggaaaacact tcccatttac 60
24 ctgttggtgc tgcgtctgtg tttcgtgatt cagcaagttt catctcaaga tttatcaagc 120
25 tgtgcaggga gatgtggga agggatttct agagatgcc cctgcaactg tgattataac 180
26 tgtcaacact acatggagtg ctgccctgat ttcaagagag tctgcaactg ggagctttcc 240
27 tgtaaaggcc gctgcttga gtccttcgag agagggagg agtgtgactg cgacgcccaa 300
28 tgtaagaagt atgacaagt ctgtcccgat tatgagagtt tctgtgcaga agtgcataat 360
29 cccacatcac caccatcttc aaagaaagca cctccacctt caggagcatc tcaaacatc 420
30 aaatcaacaa ccaaacgttc acccaaacca ccaaacaaaga agaagactaa gaaagttata 480
31 gaatcagagg aaataacaga agaacattct gtttctgaaa atcaagagtc ctctctctcc 540
32 tctctctctt cctcttcttc ttcaacaatt tggaaaatca agtcttccaa aaattcagct 600
33 gctaataagag aattacagaa gaaactcaaa gtaaaagata acaagaagaa cagaactaaa 660
34 aagaaaccta ccccaaac accagttgta gatgaagctg gaagtggatt ggacaatggt 720
35 gacttcaagg tcacaactcc tgacacgtct accaccaac acaataaagt cagcacatct 780
36 cccaagatca caacagcaaa accaataaat ccagaccca gtcttccacc taattctgat 840
37 acatctaaag agacgtcttt gacagtgaat aaagagacaa cagttgaaac taaagaaact 900
38 actacaacaa ataaacagac ttcaactgat ggaaaagaga agactacttc cgctaaagag 960
39 acacaaagta tagagaaaac atctgctaaa gatttagcac ccacatctaa agtgcgtggt 1020
40 aaacctacac ccaaagctga aactacaacc aaaggccctg ctctcaccac tccaaggag 1080
41 cccacgccca ccaactccaa ggagcctgca tctaccacac ccaaagagcc cacacctacc 1140
42 accatcaagt ctgcacccac caccaccaag gagcctgcac ccaccaccac caagtctgca 1200
43 cccaccactc ccaaggagcc tgcaccacc accaccaagg agcctgcacc caccactccc 1260
44 aaggagcctg caccaccac caccaaggag cctgcacca ccaccacca gtctgcacc 1320
45 accactccca aggagcctgc acccaccac ccaagaagc ctgccccaac taccaccaag 1380
46 gagcctgcac ccaccactcc caaggagcct acaccacca ctcccaagga gctgcaccc 1440
47 accaccaagg agcctgcacc caccactccc aaagagcctg caccactgc cccaagaag 1500
48 cctgccccaa ctacccccaa ggagcctgca cccaccactc ccaaggagcc tgcaccacc 1560
49 accaccaagg agccttcacc caccactccc aaggagcctg caccaccac caccaagtct 1620
50 gcaccacca ctaccaagga gctgcaccc accactacca agtctgcacc caccactccc 1680

(global error)

This indicates an error

regarding
numeric identifier
C3097.

C3097 and
response are
mandatory

whenever
C3087 has
a response.

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/918,624A

DATE: 01/26/2002

TIME: 12:53:20

Input Set : D:\Pa0033.txt

Output Set: N:\CRF3\01252002\I918624A.raw

```

51 aaggagcctt caccaccac caccaaggag cctgcaccca ccactcccaa ggagcctgca 1740
52 cccaccaccc ccaagaagcc tgccccaact accccaagg agcctgcacc caccactccc 1800
53 aaggaacctg caccaccac caccaagaag cctgcaccca ccgctcccaa agagcctgcc 1860
54 ccaactaccc ccaaggagac tgacccacc accccaaga agctcagcc caccaccccc 1920
55 gagaagctcg caccaccac ccctgagaag ccgcaccca ccacccctga ggagctcgca 1980
56 cccaccaccc ctgaggagcc cacaccacc acccctgagg agcctgctcc caccactccc 2040
57 aaggcagcgg ctcccaacac ccctaaggag cctgctccaa ctaccctaa ggagcctgct 2100
58 ccaactaccc ctaaggagcc tgctccaact acccctaagg agactgctcc aactaccct 2160
59 aaagggactg ctccaactac cctcaaggaa cctgcaccca ctactcccaa gaagcctgcc 2220
60 ccaaggagc ttgcaccac caccaccaag gagccacat ccaccacctc tgacaagccc 2280
61 gctccaacta cccctaaggg gactgctcca actaccctc aggagcctgc tccaactacc 2340
62 cctaaggagc ctgctccaac taccctaaag gggactgctc caactaccct caaggaacct 2400
63 gcaccaccta ctcccaagaa gcctgcccc aaggagcttg caccaccac caccaagggg 2460
64 cccacatcca ccacctctga caagcctgct ccaactacac ctaaggagac tgctccaact 2520
65 accccaagg agcctgcacc cactacccc aagaagcctg ctccaactac tctgagaca 2580
66 cctctccaa ccacttcaga ggtctctact ccaactacca ccaaggagcc taccatattc 2640
67 cacaaaagcc ctgatgaatc aactcctgag ctttctgcag aaccacacc aaaagctctt 2700
68 gaaaacagtc ccaaggaacc tgggtgtacct acaactaaga ctctgcagc gactaaacct 2760
69 gaaatgacta caacagctaa agacaagaca acagaaagag acttacgtac tacacctgaa 2820
70 actacaactg ctgcacctaa gatgacaaaa gagacagcaa ctacaacaga aaaaactacc 2880
71 gaatccaaaa taacagctac aaccacacaa gtaacatcta ccacaactca agataccaca 2940
72 ccattcaaaa ttactactct taaaacaact actcttgac ccaaagtaac tacaacaaaa 3000
73 aagacaatta ctaccactga gattatgaac aaacctgaag aaacagctaa accaaaagac 3060
74 agagctacta attctaaagc gacaactcct aaacctcaaa agccaaccaa agcaccacaa 3120
75 aaaccactt ctacacaaaa gccaaaaaca atgcctagag tgagaaaacc aaagacgaca 3180
76 ccaactcccc gcaagatgac atcaacatg ccagaattga accctacctc aagaatagca 3240
77 gaagccatgc tccaaaccac caccagacct aaccaaactc caaactccaa actagttgaa 3300
78 gtaaatccaa agagtgaaga tgcaggtggg gctgaaggag aaacacctca tatgcttctc 3360
79 aggccccatg tgttcattgc tgaagttaac ccgacatgg attacttacc gagagtacc 3420
80 aatcaaggca ttatcatcaa tccatgctt tccgatgaga ccaatatatg caatggtaag 3480
81 ccagtagatg gactgactac tttgcgcaat gggacattag ttgcattccg aggtcattat 3540
82 ttctggatgc taagtccatt cagtccacca tctccagctc gcagaattac tgaagtttgg 3600
83 ggtattcctt ccccattga tactgttttt actaggtgca actgtgaagg aaaaactttc 3660
84 ttctttaagg attctcagta ctggcgtttt accaatgata taaaagatgc aggttacc 3720
85 aaaccaatth tcaaaggatt tggaggacta actggacaaa tagtggcagc gctttcaaca 3780
86 gctaaatata agaactggcc tgaatctgtg ttttttttca agagaggtgg cagcattcag 3840
87 cagtataatt ataaacagga acctgtacag aagtgcctg gaagaaggcc tgctctaaat 3900
88 tatccagtgt atggagaaat gacacaggtt aggagacgtc gctttgaacg tgctatagga 3960
89 ccttctcaaa cacacaccat cagaattcaa tattcacctg ccagactggc ttatcaagac 4020
90 aaaggtgtcc ttcataatga agttaaagt agtatactgt ggagaggact tccaaatgtg 4080
91 gttacctcag ctatatcact gcccaacatc agaaaacctg acggctatga ttactatgcc 4140
92 ttttctaaag atcaatacta taacattgat gtgcctagta gaacagcaag agcaattact 4200
93 actcgttctg ggcagacct atccaaagtc tggtaacact gtccttagac tgatgagcaa 4260
94 aggaggagtc aactaatgaa gaaatgaata ataaattht acactgaaaa acattttatt 4320
95 aataaagaat attgacatga gtataccagt ttatatata aaatgttttt aaacttgaca 4380
96 atcattacac taaaacagat ttgataactt tattcacagt tgttattgtt tacagacct 4440
97 ttaattaata tttcctctgt ttattcctcc tctccctccc attgcatggc tcacacctgt 4500
98 aaaagaaaaa agaatcaaat tgaatatatc ttttaagaat tcaaaactag tgtattcact 4560
99 taccctagtt cattataaaa aatatctagg cattgtggat ataaaactgt tgggtattct 4620

```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/918,624A

DATE: 01/26/2002
TIME: 12:53:20

Input Set : D:\Pa0033.txt
Output Set: N:\CRF3\01252002\I918624A.raw

```

100 acaacttcaa tggaaattat tacaagcaga ttaatccctc tttttgtgac acaagtacaa 4680
101 tctaaaagtt atattggaaa acatggaaat attaaaattt tacactttta ctagctaaaa 4740
102 cataatcaca aagctttatc gtgttgata aaaaaattaa caatataatg gcaataggta 4800
103 gagatacaac aaatgaatat aacactataa cacttcatat tttccaaatc ttaatttgga 4860
104 ttttaaggag aaatcaataa atataaaata taagcacata tttattatat atctaaggta 4920
105 tacaaatctg tctacatgaa gtttacagat tggtaaatat cacctgctca acatgtaatt 4980
106 atttaataaaa actttggaac attaaaaaaa taaattggag gcttaaaaaa aaaaaaaaaa 5040
107 a 5041

```

109 <210> SEQ ID NO: 2
110 <211> LENGTH: 10211

111 <212> TYPE: DNA

112 <213> ORGANISM: Homo sapiens

114 <300> PUBLICATION INFORMATION:

115 <308> DATABASE ACCESSION NO: Genbank ID No: g1000093

W--> 117 <300> PUBLICATION INFORMATION: 2

same error as p. 1

```

118 gagaggtcgt tttcccgctc ccgagagcaa gtttatttac aaatgttgga gtaataaaga 60
119 aggcagaaca aaatgagctg ggctttggaa gaatggaaag aagggtgccc tacaagagct 120
120 cttcagaaaa ttcaagagct tgaaggacag cttgacaaac tgaagaagga aaagcagcaa 180
121 aggcagtttc agcttgacag tctcgaggct gcgcctcaga agcaaacaca gaagggtgaa 240
122 aatgaaaaaa ccgagggtac aaacctgaaa agggagaatc aaagattgat ggaaatatgt 300
123 gaaagtctgg agaaaactaa gcagaagatt tctcatgaac ttcaagtcaa ggagtcacaa 360
124 gtgaatttcc aggaaggaca actgaattca ggcaaaaaac aaatagaaaa actggaacag 420
125 gaacttaaaa ggtgtaaatc tgagcttgaa agaagccaac aagctgcgca gtctgcagat 480
126 gtctctctga atccatgcaa tacaccacaa aaaattttta caactccact aacaccaagt 540
127 caatattata gtggttccaa gtatgaagat ctaaaagaaa aatataataa agagggtgaa 600
128 gaacgaaaaa gattagaggc agaggttaaa gccttgacag ctaaaaaagc aagccagact 660
129 cttccacaag ccaccatgaa tcaccgcgac attgcccggc atcaggcttc atcatctgtg 720
130 ttctcatggc agcaagagaa gaccccaagt catctttcat ctaattctca aagaactcca 780
131 attaggagag atttctctgc atcttacttt tctggggaac aagaggtgac tccaagtcca 840
132 tcaactttgc aaatagggaa aagagatgct aatagcagtt tctttgacaa ttctagcagt 900
133 cctcatcttt tggatcaatt aaaagcgcag aatcaagagc taagaaacaa gattaatgag 960
134 ttggaactac gcctgcaagg acatgaaaaa gaaatgaaag gccaaagtga taagtttcaa 1020
135 gaactccaac tccaactgga gaaagcaaaa gtggaattaa ttgaaaaaga gaaagttttg 1080
136 aacaaatgta gggatgaact agtgagaaca acagcacaat acgaccaggc gtcaaccaag 1140
137 tatactgcat tggaaacaaa actgaaaaaa ttgacggaag atttgagttg tcagcgacaa 1200
138 aatgcagaaa gtgccagatg ttctctggaa cagaaaatta aggaaaaaga aaaggagttt 1260
139 caagaggagc tctcccgtea acagcgttct ttccaaacac tggaccagga gtgcatccag 1320
140 atgaaggcca gactcaccca ggagttacag caagccaaga atatgcacaa cgtcctgcag 1380
141 gctgaactgg ataaactcac atcagtaaag caacagctag aaaacaattt ggaagagttt 1440
142 aagcaaaaag tgtgcagagc tgaacaggcg ttccaagcga gtcagatcaa ggagaatgag 1500
143 ctgaggagaa gcatggagga aatgaagaag gaaaacaacc tccttaagag tcactctgag 1560
144 caaaaggcca gagaagtctg ccacctggag gcagaactca agaacatcaa acagtgttta 1620
145 aatcagagcc agaattttgc agaagaaatg aaagcgaaga atacctctca ggaaaccatg 1680
146 ttaagagatc ttcaagaaaa aataaatcag caagaaaact ccttgacttt agaaaaactg 1740
147 aagcttgctg tggctgatct ggaaaagcag cgagattgtt ctcaagacct tttgaagaaa 1800
148 agagaacatc acattgaaca acttaatgat aagttaagca agacagagaa agagtccaaa 1860
149 gccttgctga gtgctttaga gttaaaaaag aaagaatatg aattgaaaga agagaaaact 1920
150 ctgttttctt gttggaaaag tgaaaacgaa aaacttttaa ctcagatgga atcagaaaag 1980
151 gaaaacttgc agagtaaaat taatcacttg gaaacttgtc tgaagacaca gcaataaaaa 2040

```

FYI The alignment has been done in the Sequence Listing
The alignment is presented in the <220> to <223> fields of
each sequence using n or Xaa.

The types of errors shown exist throughout
the Sequence Listing. Please check subsequent
sequences for similar errors.

(IMPORTANT)

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/918,624A

DATE: 01/26/2002

TIME: 12:53:20

Input Set : D:\Pa0033.txt

Output Set: N:\CRF3\01252002\I918624A.raw

```

152 agtcatgaat acaacgagag agtaagaacg ctggagatgg acagagaaaa cctaagtgtc 2100
153 gagatcagaa accttcacaa cgtgttagac agtaagtcag tggaggtaga gaccagaaa 2160
154 ctagcttata tggagctaca gcagaaagct gagttctcag atcagaaaca tcagaaggaa 2220
155 atagaaaaata tgtgtttgaa gacttctcag cttactgggc aagttgaaga tctagaacac 2280
156 aagcttcagt tactgtcaaa tgaaataatg gacaaagacc ggtgttacca agacttgcac 2340
157 gccgaatatg agagcctcag ggatctgcta aaatccaaag atgcttctct ggtgacaaat 2400
158 gaagatcatc agagaagtct tttggctttt gatcagcagc ctgccatgca tcattccttt 2460
159 gcaaatataa ttggagaaca aggaagcatg ccttcagaga ggagtgaatg tcgtttagaa 2520
160 gcagaccaa gtccgaaaaa ttctgccatc ctacaaaata gaggttgattc acttgaattt 2580
161 tcattagagt ctcaaaaaca gatgaactca gacctgcaa agcagtgatg agagttggtg 2640
162 caaatcaaag gagaaataga agaaaatctc atgaaagcag aacagatgca tcaaaagttt 2700
163 gtggtgaaa caagtcagcg cattagtaag ttacaggaag acacttctgc tcaccagaat 2760
164 gttgttgctg aaaccttaag tgcccttgag aacaaggaaa aagagctgca acttttaaat 2820
165 gataaggtag aaactgagca ggcagagatt caagaattaa aaaagagcaa ccatctactt 2880
166 gaagactctc taaaggagct acaactttta tccgaaaccc taagcttggg gaagaaagaa 2940
167 atgagttcca tcatttctct aaataaaagg gaaattgaag agctgaccca agagaatggg 3000
168 actcttaagg aaattaatgc atccttaaat caagagaaga tgaacttaat ccagaaaagt 3060
169 gagagttttg caaactatat agatgaaagg gagaaaagca tttcagagtt atctgatcag 3120
170 tacaagcaag aaaaacttat tttactacaa agatgtgaag aaaccggaaa tgcataatgag 3180
171 gatcttagtc aaaaatacaa agcagcacag gaaaagaatt ctaaattaga atgcttgcta 3240
172 aatgaatgca ctagtctttg tgaaaatagg aaaaatgagt tggaaacagct aaaggaagca 3300
173 tttgcaaagg aacaccaaga attcttaaca aaattagcat ttgctgaaga aagaaatcag 3360
174 aatctgatgc tagagttgga gacagtgcag caagctctga gatctgagat gacagataac 3420
175 caaaacaatt ctaagagcga ggctgggtgg ttaaagcaag aaatcatgac tttaaaggaa 3480
176 gaacaaaaca aaatgcaaaa ggaagttaat gacttattac aagagaatga acagctgatg 3540
177 aaggtaatga agactaaaca tgaatgtcaa aatctagaat cagaaccaat taggaactct 3600
178 gtgaaagaaa gagagagtga gagaaatcaa tgtaatttta aacctcagat ggatcttgaa 3660
179 gttaaagaaa tttctctaga tagttataat gcgcagttgg tgcaattaga agctatgcta 3720
180 agaaataagg aattaaaact tcaggaaagt gagaaggaga aggagtgcct gcagcatgaa 3780
181 ttacagacaa tttagaggga tcttgaaacc agaattttgc aagacatgca gtcacaagaa 3840
182 attagtggcc ttaaagactg tgaaatagat gcggaagaaa agtatatttc agggcctcat 3900
183 gagttgtcaa caagtcaaaa cgacaatgca caccttcagt gctctctgca aacaacaatg 3960
184 aacaagctga atgagctaga gaaaatatgt gaaatactgc aggctgaaaa gtatgaactc 4020
185 gtaactgagc tgaatgattc aaggtcagaa tgtatcacag caactaggaa aatggcagaa 4080
186 gaggtaggga aactactaaa tgaagttaaa atattaaatg atgacagtgg tcttctccat 4140
187 ggtgagttag tggaagacat accaggaggt gaatttggtg aacaaccaa tgaacagcac 4200
188 cctgtgtctt tggtccatt ggacgagagt aattcctacg agcacttgac attgtcagac 4260
189 aaagaagttc aaatgcactt tgccgaattg caagagaaat tcttatcttt acaaagtga 4320
190 cacaaaattt tacatgatca gcaactgtcag atgagctcta aaatgtcaga gctgcagacc 4380
191 tatgttgact cattaaaggc cgaaaatttg gtcttgtcaa cgaatctgag aaactttcaa 4440
192 ggtgacttg tgaaggagat gcagctgggc ttggaggagg ggctcgttcc atccctgtca 4500
193 tcctcttggt tgccctgacag ctctagtctt agcagtttgg gagactcctc cttttacaga 4560
194 gctcttttag aacagacagg agatatgtct cttttagata attagaagg ggctgtttca 4620
195 gcaaaccagt gcagtgtaga tgaagtattt ctgcagcagc tgcaggagga gaatctgacc 4680
196 aggaaagaaa ccccttcggc ccagcgaag ggtgttgaag agcttgagtc cctctgtgag 4740
197 gtgtaccggc agtccctcga gaagctagaa gagaaaatgg aaagtcaagg gattatgaaa 4800
198 aataaggaaa ttcaagagct cgagcagtta ttaagttctg aaaggcaaga gcttgactgc 4860
199 cttaggaagc agtatttgtc agaaaatgaa cagtggcaac agaagctgac aagcgtgact 4920
200 ctggagatgg agtccaagtt ggcggcagaa aagaaacaga cggaacaact gtcacttgag 4980

```


RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/918,624A

DATE: 01/26/2002

TIME: 12:53:20

Input Set : D:\Pa0033.txt

Output Set: N:\CRF3\01252002\I918624A.raw

```

201 ctggaagtag cactgactcca gctacaaggt ctggacttaa gttctcgggc tttgcttgcc 5040
202 atcgacacag aagatgctat tcaaggccga aatgagagct gtgacatata aaaagaacat 5100
203 acttcagaaa ctacagaaaag aacaccaaag catgatgttc atcagatttg tgataaagat 5160
204 gctcagcagg acctcaatct agacattgag aaaataactg agactgggtgc attgaaaccc 5220
205 acaggagagt gctctgggga acagtcceca gataccaatt atgagcctcc aggggaagat 5280
206 aaaacccagg gctcttcaga atgcattttct gaattgtcat tttctgggtc taatgctttg 5340
207 gtacctatgg atttctctggg gaatcaggaa gatattccata atcttcaact gcgggtaaaa 5400
208 gagacatcaa atgagaattt gagattactt catgtgatag aggaccgtga cagaaaagtt 5460
209 gaaagtttgc taaatgaaat gaaagaatta gactcaaaac tccatttaca ggaggtacaa 5520
210 ctaatgacca aaattgaagc atgcatagaa ttggaaaaaa tagttgggga acttaagaaa 5580
211 gaaaactcag atttaagtga aaaattggaa tatttttctt gtgatcacca ggagttactc 5640
212 cagagagtga aaacttctga aggcctcaat tctgatttag aaatgcatgc agataaatca 5700
213 tcacgtgaag atattggaga taatgtggcc aagggtgaatg acagctggaa ggagagattt 5760
214 cttgatgtgg aaaatgagct gagtaggata agatcggaga aagctagcat tgagcatgaa 5820
215 gccctctacc tggaggctga cttagaggta gttcaaacag agaagctatg tttagaaaaa 5880
216 gacaatgaaa ataagcagaa ggttattgtc tgccttgaag aagaactctc agtgggcaca 5940
217 agtgagagaa accagcttcg tggagaatta gatactatgt caaaaaaac cacggcactg 6000
218 gatcagttgt ctgaaaaaat gaaggagaaa acacaagagc ttgagtctca tcaaagttag 6060
219 tgtctccatt gcattcaggt ggcagaggca gaggtgaagg aaaagacgga actccttcag 6120
220 actttgtcct ctgatgtgag tgagctgtta aaagacaaaa ctcatctcca ggaaaagctg 6180
221 cagagtttgg aaaaggactc acaggcactg tctttgacaa aatgtgagct ggaaaacca 6240
222 attgcacaac tgaataaaga gaaagaattg cttgtcaagg aatctgaaag cctgcaggcc 6300
223 agactgagtg aatcagatta tgaaaagctg aatgtctcca aggccttga ggccgcactg 6360
224 gtggagaaaag gtgagttcgc attgaggctg gagagttcgc attgaggccg atgaaaagaa gcagctgcac 6480
225 agaagaggca tgcagaaaact gagagttcgc attgaggccg atgaaaagaa gcagctgcac 6480
226 atcgcagaga aactgaaaaga acgcgagcgg gagaatgatt cacttaagga taaagttgag 6540
227 aaccttgaaa gggaattgca gatgtcagaa gaaaaccagg agctagtgat tcttgatgcc 6600
228 gagaattcca aagcagaagt agagactcta aaaacacaaa tagaagagat ggccagaagc 6660
229 ctgaaagttt ttgaattaga cttgtcacg ttaaggtctg aaaaagaaaa tctgacaaaa 6720
230 caaatacaag aaaaacaagg tcagttgtca gaactagaca agttactctc ttcatttaaa 6780
231 agtctgttag aagaaaagga gcaagcagag atacagatca aagaagaatc taaaactgca 6840
232 gtggagatgc ttcagaatca gttaaaggag ctaaattgagg cagtagcagc cttgtgtggt 6900
233 gaccaagaaa ttatgaaggc cacagaacag agtctagacc caccaataga ggaagagcat 6960
234 cagctgagaa atagcattga aaagctgaga gccgcctag aagctgatga aaagaagcag 7020
235 ctctgtgtct tacaacaact gaaggaaagt gagcatcatg cagatttact taagggtaga 7080
236 gtggagaacc ttgaaagaga gctagagata gccaggacaa accaagagca tgcagctctt 7140
237 gaggcagaga attccaaagg agaggtagag accctaaaag caaaaataga agggatgacc 7200
238 caaagtctga gaggtctgga attagatggt gttactataa ggtagaaaaa agaaaatctg 7260
239 acaaataaat tacaaaaaga gcaagagcga atatctgaat tagaaataat aaattcatca 7320
240 tttgaaaata ttttgcaaga aaaagagcaa gagaaagtac agatgaaaga aaaatcaagc 7380
241 actgccatgg agatgcttca aacacaatta aaagagctca atgagagagt ggcagccctg 7440
242 cataatgacc aagaagcctg taaggccaaa gagcagaatc ttagtagtca agtagagtgt 7500
243 cttgaacttg agaaggctca gttgctacaa ggccttgatg aggccaaaaa taattatatt 7560
244 gttttgcaat cttcagtga tggcctcatt caagaagtag aagatggcaa gcagaaaactg 7620
245 gagaagaagg atgaagaaat cagtagactg aaaaatcaaa ttcaagacca agagcagctt 7680
246 gtctctaaac tgtcccaggt ggaaggagag caccaacttt ggaaggagca aaacttagaa 7740
247 ctgagaaatc tgacagtgga attggagcag aagatccaag tgctacaatc caaaaatgcc 7800
248 tctttgcagg acacattaga agtgctgcag agttcttaca agaattctaga gaatgagctt 7860
249 gaattgacaa aaatggacaa aatgtccttt gttgaaaaag taaacaaaat gactgcaag 7920

```

VERIFICATION SUMMARY

DATE: 01/26/2002

PATENT APPLICATION: US/09/918,624A

TIME: 12:53:21

Input Set : D:\Pa0033.txt

Output Set: N:\CRF3\01252002\I918624A.raw

L:8 M:270 C: Current Application Number differs, Replaced Current Application Number
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:22 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:1
L:117 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:2
L:333 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:340 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:349 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:350 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:400 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:401 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:542 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:570 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:580 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:7
L:758 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:759 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:760 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:761 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:773 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:12
L:856 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:872 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:1001 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:18
L:1096 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:19
L:1191 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:21
L:1256 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
L:1257 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
L:1281 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:23
L:1329 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:24
L:1378 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:25
L:1425 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:26
L:1504 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:27
L:1585 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:28
L:1631 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:29
L:1683 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:30
L:1767 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31
L:1774 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31
L:1810 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:33
L:2015 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:37
L:2117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40
L:2164 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41
L:2178 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:42
L:2231 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:2232 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:2233 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:2316 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:2317 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:2429 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:47
L:2453 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:48
L:2672 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:49

VERIFICATION SUMMARY

DATE: 01/26/2002

PATENT APPLICATION: US/09/918,624A

TIME: 12:53:21

Input Set : D:\Pa0033.txt

Output Set: N:\CRF3\01252002\I918624A.raw

L:2730 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50
L:2765 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51
L:2766 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51
L:2778 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51
L:2785 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51
L:2817 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52
L:2820 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52
L:2832 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:53
L:2871 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:54
L:2961 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56
L:3078 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58
L:3088 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:59
L:3165 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60
L:3168 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60
L:3199 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61
L:3230 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:62
L:3304 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:63
L:3352 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:64
L:3507 M:256 W: Invalid Numeric Header Field, Identifier <309> Expected, SEQ:67